

CLAIMS

What is claimed is:

1. A method of placing a material on a plurality of moving webs, the method comprising the steps of:
 - providing a first web having a transverse width in a first upstream zone such that the first web moves at a first web velocity in the positive x direction;
 - providing a first assembly for diverting the first web from the first upstream zone to a first intermediate zone and for diverting the first web from the first intermediate zone to a first downstream zone;
 - providing a second web having a transverse width in a second upstream zone such that the second web moves at a second web velocity in the positive x direction;
 - providing a second assembly for diverting the second web from the second upstream zone to a second intermediate zone and for diverting the second web from the second intermediate zone to a second downstream zone;
 - periodically overlapping the first assembly and second assembly in an alternating fashion by translating the first assembly and second assembly in a positive x direction in a first plane and a negative x direction in a second plane such that when the first assembly translates in the positive x direction, the first web in the first intermediate zone has a velocity, with respect to the first assembly, which is less than the first web velocity and such that when the second assembly translates in the positive x direction, the second web in the second intermediate zone has a velocity, with respect to the second assembly, which is less than the second web velocity; and
 - alternately applying the material across at least a portion of the transverse width of the first web in the first intermediate zone and across at least a portion of the transverse width of the second web in the second intermediate zone such that the application of the material to the first web and the second web is continuous.
2. The method of claim 1, wherein translating the first assembly in the positive x direction causes the first web in the first intermediate zone to be stationary with respect to the first assembly and wherein translating the second assembly in the positive x direction causes the second web in the second intermediate zone to be stationary with respect to the second assembly.

3. The method of claim 1, further comprising the step of combining the first web or second web with a third or fourth web such that a laminate structure is formed.
4. The method of claim 1, wherein the material comprises a continuously extruded polymer.
5. The method of claim 1, wherein the material comprises a continuously sprayed polymer.
6. The method of claim 1 further comprising the step of splitting a parent web thereby forming the first web and the second web.
7. The method of claim 1 further comprising the step of separating the material between the first assembly and the second assembly.
8. A method of placing a material on a plurality of moving webs, the method comprising the steps of:
 - providing a first path comprising a first upstream zone, a first downstream zone, and a first intermediate zone, the first intermediate zone being disposed between the first upstream zone and the first downstream zone, wherein the first intermediate zone comprises a first assembly;
 - providing a second path comprising a second upstream zone, a second downstream zone, and a second intermediate zone disposed between the second upstream zone and the second downstream zone, wherein the second intermediate zone comprises a second assembly;
 - feeding a first web, having a longitudinal centerline and a transverse width, along the first upstream zone such that the first web moves at a first web velocity in the positive x direction;
 - turning the first web from the first upstream zone into the first intermediate zone and into the first assembly such that the longitudinal centerline of the first web in the first intermediate zone is perpendicular to the longitudinal centerline of the first web in the first upstream zone and such that the first web in the first intermediate zone extends toward the second assembly;
 - inverting the first web in the first intermediate zone such that the first web in the first intermediate zone extends away from the second assembly;

turning the first web in the first intermediate zone into the first downstream zone such that the longitudinal centerline of the first web in the first downstream zone is parallel to the longitudinal centerline of the first web in the first upstream zone;

feeding a second web, having a longitudinal centerline and a transverse width, along the second upstream zone such that the second web moves at a second web velocity in the positive x direction;

turning the second web from the second upstream zone into the second intermediate zone and into the second assembly such that the longitudinal centerline of the second web in the second intermediate zone is perpendicular to the longitudinal centerline of the second web in the second upstream zone and such that the second web in the second intermediate zone extends toward the first assembly;

inverting the second web of the second intermediate zone such that the second web of the second intermediate zone extends away from the first assembly;

turning the second web in the second intermediate zone into the second downstream zone such that the longitudinal centerline of the second web in the second downstream zone is parallel to the longitudinal centerline of the second web in the second upstream zone;

periodically overlapping the first assembly and second assembly in an alternating fashion by translating the first assembly and second assembly in a positive x direction in a first plane and a negative x direction in a second plane such that when the first assembly translates in the positive x direction, the first web in the first intermediate zone has a velocity, with respect to the first assembly, which is less than the first web velocity and such that when the second assembly translates in the positive x direction, the second web in the second intermediate zone has a velocity, with respect to the second assembly, which is less than the second web velocity; and

alternately applying the material across at least a portion of the transverse width of the first web in the first intermediate zone and across at least a portion of the transverse width of the second web in the second intermediate zone such that the application of the material to the first web and the second web is continuous.

9. The method of claim 8, wherein translating the first assembly in the positive x direction causes the first web in the first intermediate zone to be stationary with respect to the first assembly and wherein translating the second assembly in the positive x direction causes the second web in the second intermediate zone to be stationary with respect to the second assembly.

10. The method of claim 8, wherein the material comprises a continuously extruded polymer.
11. The method of claim 8, wherein the material comprises a continuously sprayed polymer.
12. The method of claim 8 further comprising the step of splitting a parent web thereby forming the first web and the second web.
13. The method of claim 8 further comprising the step of separating the material in between the first assembly and the second assembly.
14. The method of claim 8 further comprising the step of combining the first web or second web with a third or fourth web such that a laminate structure is formed.
15. A method of placing a material on a single web having a transverse width, the method comprising the steps of:
 - providing the single web in a first upstream zone such that the web is moving at a first upstream zone velocity in the positive x direction;
 - providing a first assembly for diverting the single web from the first upstream zone to a first intermediate zone and for diverting the single web from the first intermediate zone to a first downstream zone;
 - transporting the single web from the first downstream zone into a second upstream zone such that the single web is moving at a second upstream zone velocity in the positive x direction;
 - providing a second assembly for diverting the single web from the second upstream zone to a second intermediate zone and for diverting the single web from the second intermediate zone to a second downstream zone;
 - periodically overlapping the first assembly and second assembly in an alternating fashion by translating the first assembly and second assembly in a positive x direction in a first plane and a negative x direction in a second plane such that when the first assembly translates in the positive x direction, the single web in the first intermediate zone has a velocity, with respect to the first assembly, which is less than the first upstream zone velocity and such that when the second assembly translates in the positive x direction, the single web in the second intermediate zone has a velocity, with respect to the second assembly, which is less than the second upstream zone velocity; and

alternately applying the material across at least a portion of the transverse width of the single web in the first intermediate zone and across at least a portion of the transverse width of the single web in the second intermediate zone such that the application of the material to the single web in the first intermediate zone and the single web in the second intermediate zone is continuous.

16. The method of claim 15 further comprising the step of combining the single web with a third or fourth web to create a laminate structure.
17. The method of claim 15 further comprising the step of separating the material between the first assembly and the second assembly.
18. The method of claim 15, wherein the material comprises a continuously extruded polymer.
19. The method of claim 15, wherein the material comprises a continuously sprayed polymer.
20. The method of claim 15, wherein translating the first assembly in the positive x direction causes the single web in the first intermediate zone to be stationary with respect to the first assembly and wherein translating the second assembly in the positive x direction causes the single web in the second intermediate zone to be stationary with respect to the second assembly.